

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
23 June 2005 (23.06.2005)

PCT

(10) International Publication Number  
**WO 2005/057755 A1**

(51) International Patent Classification<sup>7</sup>: H02K 1/06, 21/10

(21) International Application Number:  
PCT/CA2004/002097

(22) International Filing Date: 9 December 2004 (09.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/528,047 9 December 2003 (09.12.2003) US

(71) Applicant (for all designated States except US): ELEC-  
TROTECHNOLOGIES SELEM, INC. [CA/CA]; 2610  
Rue Goselin, Quebec, Quebec G1P 3G1 (CA).

(72) Inventors; and

(75) Inventors/Applicants (for US only): CROS, Jerome  
[CA/CA]; 900, rue Rochette, Ste Foy, Quebec G1V 2S7

(CA). VIAROUGE, Philippe [CA/CA]; 933, De la  
Gatineau, Sainte-Foy, Quebec G1V 3A2 (CA).

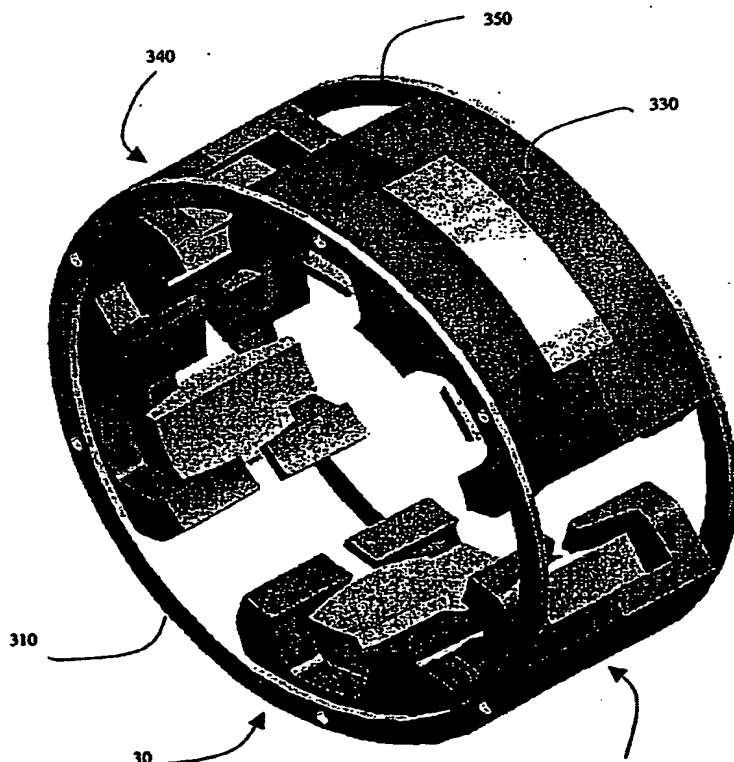
(74) Agent: BERESKIN & PARR; 40 King Street West, Suite  
4000, Toronto, Ontario M5H 3Y2 (CA).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,

[Continued on next page]

(54) Title: POLYPHASE CLAW-POLE MACHINES WITH A SEGMENTED MAGNETIC CIRCUIT



(57) Abstract: A polyphase claw-pole  
armature for an electrical machine is made  
with several identical segments regularly  
distributed along the direction of motion and  
spaced by a magnetic air gap. The number of  
segments is equal or a multiple of the number  
of winding phases. Each segment includes  
a magnetic circuit with a plurality of claws  
arranged in a plurality of rows, with the  
base of each claw connected to a common  
yoke. One or a plurality of non-interlaced  
coils are included inside each segment, with  
the coils being wound around the bases of  
corresponding claws.

WO 2005/057755 A1